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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,572	11/02/2001	Malcolm M. Smith	062891.0600	9167

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BAKER BOTTS L.L.P.  
2001 ROSS AVENUE  
SUITE 600  
DALLAS, TX 75201-2980

EXAMINER

JAMAL, ALEXANDER

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/033,572

Applicant(s)

SMITH, MALCOLM M.

Examiner

Alexander Jamal

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Based upon the submitted amendment (4-11-2006), the examiner notes that claims 1,5,9,13,17,21,25,29,32,37 have been amended.
2. Examiner withdraws the 112 first paragraph rejection to claims 1-40.
3. Examiner contends that the previous set of prior art reads on the claims as written, however, examiner submits an additional piece of prior art (Higashi et al. 6026115) showing the well known and obvious function of adding and averaging multiple received diversity signals in order to improve the quality of signal reception in a diversity receiver.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1-40** rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo (6728919), and further in view of Obuchi et al. (6219550).

As per **claims 1,17**, Kondo discloses a communication system in which the same data signal is sent from a first and second base station. The signals are divided into frames and are measured and manipulated on a frame by frame basis (ie. a first signal portion, a second signal portion ect.) (Col 1 line 49 to Col 2 line 17) (Col 3 lines 1-19). Signal characteristics including error rate and signal level are used to select the best received frame on a frame by frame basis. As per applicant's claim language, the first and third signals would be the first frames sent by base stations 1 and 2 and the second and fourth signals would be the second frame sent by base stations one and two. The 'first and second signal characteristics' would be the measured signal characteristics for the first and third signal portions. However, Kondo does not disclose an additional function where the first and third signals are added or averaged together (instead of being selected from) based upon signal characteristics.

Obuchi teaches a site diversity communications system that implements both a selecting function and a composing (adding/averaging) function for received signal frames (Fig. 20 Col 34 lines 10-67). The appropriate function is performed based on a signal characteristic (error rate). Obuchi further teaches a selector that may selectively choose a signal (Col 34 lines 60-67), or selectively merge (add or average), via a composite function, the data signals based upon the signal characteristics (error rate) (Col 35 lines 1-25). Obuchi discloses the adding of signal portions in Figs. 7a-7c, 8a-8b as part of the composite function. Obuchi further teaches (Fig. 25) an embodiment where the signal portions are either combined (via composite devices 45a, 35) or individually selected (via selector 39c). Obuchi further discloses that this system improves the

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performance of the communications system (Col 35 lines 25-32). It would have been obvious to one of ordinary skill in the art at the time of this application to add the additional combining (composite) function together with the selecting function of Kondo's system for the purpose of increasing the performance of the system.

As per **claim 9**, claim rejected as a method performed by the device of the claim 1 rejection.

As per **claim 25**, claim rejected for same reasons as claim 1 rejection. Software (on a computer readable medium) is inherent to the cellular system for the purpose of controlling the hardware.

As per **claim 33**, claim rejected for same reasons as claim 1 rejection. Kondo's wireless network comprises first network 7 (inherently comprising a gateway for the purpose of interfacing with additional networks) (Fig. 1), base station controller 6, mobile station 5, and base stations 1,3.

As per **claims 2,10,18,26,34**, Kondo's signal quality measurements of signaling from the first base station is compared to that of the second base station (Col 2 lines 55-65) and the appropriate frame (first or third signal portion) is selected.

As per **claims 3,11,19,27,35**, the quality values comprise error-detection and signal size.

As per **claims 5,13,21,29,37**, the measurements and decisions are made on a frame by frame basis (ie. between a first and second frame, and then between a third and fourth frame). The best quality frames from the received signals are chosen and re-combined.

As per **claims 4,12,20,28,36**, Obuchi discloses that the signal characteristics (error rates) are averaged (Col 34 lines 30-50).

As per **claims 6-8,14-16,22-24,30-32,38-40**, Obuchi discloses a composing function that adds the signal sizes from the signals received from the base stations (Col 22 lines 50-67, Figs. 7a-7c, 8a-8b). Obuchi further discloses that the error rate (a signal characteristic associated with a signal portion that comprises a signal size) is averaged (Col 34 lines 30-55). Examiner notes that averaging inherently (by definition) comprises adding.

### **Response to Arguments**

6. Applicant's arguments with respect to claims 1-40 have been considered but are moot in view of the new ground(s) of rejection.

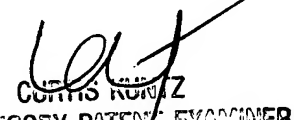
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Jamal whose telephone number is 571-272-7498. The examiner can normally be reached on M-F 9AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis A Kuntz can be reached on 571-272-7499. The fax phone numbers for the organization where this application or proceeding is assigned are **571-273-8300** for regular communications and **571-273-8300** for After Final communications.

  
CURTIS KUNTZ  
SUPERVISORY PATENT EXAMINER  
TECHNICAL CENTER 2600

AJ  
June 12, 2006